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| EXAMINER | |
|---|---|
| LU, ZHIYU | |
| ART UNIT | PAPER NUMBER |
| 2618 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| Office Action Summary | Application No. 10/519,858 | Applicant(s) HAYASHI ET AL. |
|---|---|---|
| | Examiner Zhiyu Lu | Art Unit 2618 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *22 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 12/22/2006 have been fully considered but they are not persuasive.

Regarding 112 rejections, though claims 1-6 are claiming to be a communication method, no steps are involved but descriptions of waveforms.

Regarding rejections on claims 1 and 7, Applicants have argued on the waveforms of Shanks et al. are not being periodic.

However, the waveforms of Shanks et al. are used in communication for a period of time and their representations are always the same, which means periodic. Also, a certain calibration signal is repeated a plurality of times (paragraph 0016), which means also periodic.

Regarding rejections on claims 2-6 and 8-9, Applicants have argued that Shanks et al. do not teach the use of the third waveforms in place of the successive first or second waveforms. However, the Examiner does not agree with the Applicants. Claims 2-6 and 8-9 are claiming descriptions of three waveforms. Shanks et al. teach using three different waveforms for representations, which would have expected to perform equally well with Applicants' invention because they both used to for representations. Waveform is a mathematical representation that can be easily created or replicated by one of ordinary skill in the art. Its shape and representation are due to one's own choosing. Thus, it would have been obvious to one of ordinary skill in the

art to modify Shanks et al.'s waveforms to obtain the invention as specified in the claims for representations.

### *Claim Objections*

2. Claim 7 is objected to because of the following informalities:

In claim 7, line 6, replace ";" after "detection circuit" with --,--.

In claim 7, line 6, remove "and" before "a clock generating".

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. In claim 7, Applicants claim "a reader for reading data information that include data and a clock from the transponder." But according to the filed application, "a transponder that receives a signal that includes data and a clock signal transmitted from the reader" (paragraph 0052 of published application), but not from the transponder. And it is known to one of ordinary skill in the art that it is the reader that sends a clock signal to a transponder for synchronization.

4. Claim 7 recites the limitation "the transponder" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

5. Claims 1-6 provide for the use of a communication method, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

6. Claims 7-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

Claims 1-5 are method claims. Claim 7, as dependent of any one of claims 1-5, turns to be an apparatus. So as claims 8-9. Then claim 10, who depends from claim 7, turns back to a method. It is indefinite that whether the claim set to be treated as a method or an apparatus.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 7 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Shanks et al. (US2002/0152044).

Regarding claim 1, Shanks et al. anticipate a communication method for a noncontact RF ID system that uses a first waveform, a second waveform, and a third waveform, wherein:

either one of the rising timing or the falling timing of a waveform output when communicating by using the first waveform, the second waveform, and the third waveform, becomes periodic (Figs. 3-5, paragraphs 0096-0103).

Regarding claim 7, Shanks et al. anticipate the limitation of claim 1.

Shanks et al. also anticipate a noncontact RF ID system which uses the communication method according to claim 1, comprising:

a reader (104 of Fig. 1) for reading data information that include data and a clock (paragraphs 0392) from the transponder (120 of Fig. 1),

the transponder comprising an antenna (1010a-b of Fig. 10) for receiving the signal from a reader, a DC power detecting circuit, a signal detecting circuit (paragraphs 0127-0128), an input amplifier (paragraph 0367), and a clock generating device (1026 of Fig. 10), a demodulator

(1021 of Fig. 10, paragraph 0144), a control logic circuit (1024 of Fig. 10), and a memory (1020 of Fig. 10), wherein

the DC power detecting circuit comprising a power accumulating capacitor that activates the transponder when a signal is received (paragraphs 0127-0128);

the clock generating device that generates an internal clock such that the state transition of the internal clock is generated in synchronism with the timing of the rise of the modulating signal (paragraphs 0391-0393); and

the control logic circuit that operates in synchronism with the state transition of the clock generated by the clock generating device (paragraphs 0391-0393).

Regarding claim 10, Shanks et al. anticipate the limitation of claim 7.
Shanks et al. anticipate a method of transmitting and receiving modulated data information comprising a first waveform, a second waveform, and a third waveform, in the noncontact RF ID system as explained in the responses to claims 1 and 7.

## *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 2-6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shanks et al. (US2002/0152044).

Regarding claim 2, Shanks et al. teach the limitation of claim 1.

Shanks et al. teach a first waveform and a second waveform are formed by a basic waveform that has one of a rising state transition and a falling state transition at the approximate center part of the waveform (Figs. 3-4); and

in the case in which said state transition occurs outside the approximate center of the basic waveform when communicating by using the first waveform and the second waveform, communication is carried out by using the third waveform in place of the first waveform and the second waveform (Figs. 3-5, paragraphs 0096-0103).

But, Shanks et al. do not expressly disclose a third waveform is formed by a plurality of basic waveforms that have said one state transition at the approximate center part of the waveform, and the third waveform is formed such that said one state transition occurs only at the approximate center part of the plurality of the waveforms.

However, at the time the invention was made, it would have been a person of ordinary skill in the art to modify the third waveform into formed by a plurality of basic waveforms that have said one state transition at the approximate center part of the waveform, and the third waveform is formed such that said one state transition occurs only at the approximate center part of the plurality of the waveforms. One of ordinary skill in the art would have expected Applicant's invention to perform equally well with the waveform Shanks et al. disclose because the third waveform serves its representation and distinguishable from the first and second waveforms.

Regarding claim 6, Shanks et al. teach the limitation of claim 2.

Shanks et al. also teach communication is carried out by assigning a code tt1" and a code tç0" to the first waveform and the second waveform, and assigning a combination of the code "1" and the code "0" associated with the combination to the third waveform, which is used in place of the combination of the first waveform and the second waveform (Figs. 3-4).

Regarding claim 3, Shanks et al. teach the limitation of claim 2.

But, Shanks et al. do not expressly disclose the third waveform is a waveform that is used in place of m waveforms (here, m is a natural number equal to or greater than 2) when one of the first waveform and the second waveform continues in succession and an identical rising or falling state transition which is occurred at the approximate center part of a waveform is occurred at the connection part of the waveforms, and furthermore, a combination of the first waveform and the second waveform that includes a connection part of the waveforms that produces the state transition, consists of m waveforms.

However, at the time the invention was made, it would have been a person of ordinary skill in the art to modify the third waveform into being a waveform that is used in place of m waveforms (here, m is a natural number equal to or greater than 2) when one of the first waveform and the second waveform continues in succession and an identical rising or falling state transition which is occurred at the approximate center part of the waveform is occurred at the connection part of the waveforms, and furthermore, a combination of the first waveform and the second waveform that includes a connection part of the waveforms that produces the state transition, consists of m waveforms. One of ordinary skill in the art would have expected Applicant's invention to

perform equally well with the waveform Shanks et al. disclose because the third waveform serves its representation and distinguishable from the first and second waveforms..

Regarding claim 4, Shanks et al. teach the limitation of claim 3.

Shanks et al. do not expressly disclose in the case in which the state transition is rising, the first waveform is a waveform that maintains a low level in a negative time direction for T/2 from the point in time that the waveform first rises, which is a center point of the waveform, and maintains a high level state for T/2 in a positive time direction from this center point;

the second waveform is a waveform that maintains a high level state in the positive time direction for t1 from a point in time that the waveform first rises, which is the center point of the waveform, maintains a low level state for time t2 until an end point of the waveform, maintains a low level state in the negative time direction for time t1 from the center point of the waveform, and maintains a high level state for time t2 until a starting point of the waveform (here, t denotes time, T denotes one cycle of the first and second waveforms, and $t1 + t2 = T/2$); and

the third waveform is a C(2n) waveform which, in the case in which m=2n, maintains a high level state in the positive time direction for t6 from the point in time that the waveform first rises; maintains a low level state in the negative time direction for t3 from the point in time that the waveform first rises; maintains a high level state for time t4 until the starting point of the waveform; maintains a high level state in the positive time direction for $t(2 (n - k) + 6)$ from the point in time that the waveform rises for the $(n + 1 - k)$th time; maintains a low level state for $t (2 (n - k) + 3)$ in the negative time direction from the point in time that the waveform rises for the $(n + 1 - k)$th time; maintains a high level state in the positive time direction for T/2 from the

point in time that the waveform rises for the nth time; maintains a low level state in the negative time direction for t(2 (n - 1) + 3) from the point in time that the waveform rises for the nth time; maintains a high level state in the positive time direction for t(2 (n - 1) +3) from the point in time that the waveform rises for the (n + l)th time; maintains a low level state in the negative time direction for T/2 from the point in time that the waveform rises for the (n + l)th time; maintains a high level state in the positive time direction for t(2 (n - k) + 3) from the point in time that the waveform rises for the (n + k)th time; maintains a low level state in the negative time direction for t (2 (n - k) + 6) from the point in time that the waveform rises for the (n + k)th time; maintains a low level state in the negative time direction for t6 from the point in time that the waveform rises the last time; maintains a high level state in the positive time direction for t3 from the point in time that the waveform rises the last time; and maintains a low level state for time t4 until an end point of the waveform, where n and k are natural numbers; n >= k >= 1; t is time; T is one cycle of the first and second waveforms; and t3 + t4 = T/2; t(2 (n - k) + 5) + t(2 (n - k) + 6) = T (when n and k >= 2); and

in the case in which m = 2n + 1, the third waveform is a C(2n + 1) waveform that maintains a high level state in the positive time direction for t6 from the point in time that the waveform first rises; maintains a low level state in the negative time direction for t3 from the point in time that the waveform first rises; maintains a high level state for t4 from the starting point of the waveform; maintains a high level state in the positive time direction for t(2 (n - k) + 6) from the point in time that the waveform rises for the (n + 1 – k)th time; maintains a low level state in the negative time direction for t(2 (n - k) + 3) from the point in time that the waveform rises for the (n + 1 – k)th time; maintains a high level state in the positive time direction for t(2

(n - 1) + 5) from the point in time that the waveform rises for the (n + 1)+ time; maintains a low level state in the negative time direction for t(2 (n - 1) + 5) from the point in time that the waveform rises for the (n + 1)th time; maintains a high level state in the positive time direction for t(2 (n - k) + 3) from the point in time that the waveform rises for the (n + 1 + k)th time; maintains a low level state in the negative time direction for t(2 (n - k) + 6) from the point in time that the waveform rises for the (n + 1 + k)th time; maintains a low level state in the negative time direction for t6 from the point in time that the waveform rises the last time; maintains a high level state in the positive time direction for time t3 from the point in time that the waveform rises the last time; and maintains a low level state for t4 until the end point of the waveform; (where n and k are natural numbers, n >= k >= 1, t is time, T is one cycle of the first and second waveforms, t3 + t4 = T/2, and t(2 (n - k) + 5) + t (2 (n - k) + 6) = T).

However, at the time the invention was made, it would have been a person of ordinary skill in the art to modify the first waveform, the second waveform, and the third waveform into as specified in the claim. One of ordinary skill in the art would have expected Applicant's invention to perform equally well with the waveforms Shanks et al. disclose because the first, second, and third waveforms serve their representations and distinguishable from each other.

Regarding claim 5, Shanks et al. teach the limitation of claim 3.

But, Shanks et al. do not expressly disclose in the case in which the state transition is a falling state transition, the first waveform is an inverted waveform that maintains a low level in a negative time direction for T/2 from the point in time that the waveform first rises, which is a

center point of the waveform, and maintains a high level state for T/2 in the positive time direction from this center point;

the second waveform is an inverted waveform that maintains a high level state in the positive time direction for t1 from the point in time that the waveform first rises, which is the center point of the waveform, maintains a low level state for time t2 until the end point of the waveform, maintains a low level state in the negative time direction for time t1 from the center point of the waveform, and maintains a high level state for time t2 until the starting point of the waveform (here, t denotes time, T denotes one cycle of the first and second waveforms, and t1 + t2 = T/2); and

the third waveform is an inverted C(2n) waveform which, in the case in which m=2n, maintains a high level state in a positive time direction for t6 from the point in time that the waveform first rises; maintains a low level state in the negative time direction for t3 from the point in time that the waveform first rises; maintains a high level state for time t4 until the starting point of the waveform; maintains a high level state in the positive time direction for t(2 (n - k) + 6) from the point in time that the waveform rises for the (n + 1 – k)th time; maintains a low level state for t (2 (n - k) + 3) in the negative time direction from the point in time that the waveform rises for the (n + 1 – k)th time; maintains a high level state in the positive time direction for T/2 from the point in time that the waveform rises for the nth time; maintains a low level state in the negative time direction for t(2 (n - 1) + 3) from the point in time that the waveform rises for the nth time; maintains a high level state in the positive time direction for t(2 (n - 1) +3) from the point in time that the waveform rises for the (n + 1)th time; maintains a low level state in the negative time direction for T/2 from the point in time that the waveform rises

for the (n + 1)th time; maintains a high level state in the positive time direction for t(2 (n - k) + 3) from the point in time that the waveform rises for the (n + k)th time; maintains a low level state in the negative time direction for t (2 (n - k) + 6) from the point in time that the waveform rises for the (n + k)th time; maintains a low level state in the negative time direction for t6 from the point in time that the waveform rises the last time; maintains a high level state in the positive time direction for t3 from the point in time that the waveform rises the last time; and maintains a low level state for time t4 until the end point of the waveform, where n and k are natural numbers', n >= k >= 1 ; t is time; T is one cycle of the first and second waveforms; and t3 + t4 = T/2; t(2 (n - k) + 5) + t(2 (n - k) + 6) = T (when n and k >= 2); and in the case in which m = 2n + 1, the third waveform is an inverted C(2n + 1) waveform that maintains a high level state in the positive time direction for t6 from the point in time that the waveform first rises; maintains a low level state in the negative time direction for t3 from the point in time that the waveform first rises; maintains a high level state for t4 from the starting point of the waveform; maintains a high level state in the positive time direction for t(2 (n - k) + 6) from the point in time that the waveform rises for the (n + 1 – k)th time; maintains a low level state in the negative time direction for t(2 (n - k) + 3) from the point in time that the waveform rises for the (n + 1 – k)th time; maintains a high level state in the positive time direction for t(2 (n - 1) + 5) from the point in time that the waveform rises for the (n + 1)th time; maintains a low level state in the negative time direction for t(2 (n - 1) + 5) from the point in time that the waveform rises for the (n + 1)t.11 time; maintains a high level state in the positive time direction for t(2 (n - k) + 3) from the point in time that the waveform rises for the (n + 1 + k)th time; maintains a low level state in the negative time direction for t(2 (n - k) + 6) from the point in time that the waveform rises for the

(n + 1 + k)th time; maintains a low level state in the negative time direction for t6 from the point in time that the waveform rises the last time; maintains a high level state in the positive time direction for time t3 from the point in time that the waveform rises the last time; and maintains a low level state for t4 until the end point of the waveform; (where n and k are natural numbers, n >= k >= 1, t is time, T is one cycle of the first and second waveforms, t3 + t4 = T/2, and t(2 (n - k) + 5) + t (2 (n - k) + 6) = T).

However, at the time the invention was made, it would have been a person of ordinary skill in the art to modify the first waveform, the second waveform, and the third waveform into as specified in the claim. One of ordinary skill in the art would have expected Applicant's invention to perform equally well with the waveforms Shanks et al. disclose because the first, second, and third waveforms serve their representations and distinguishable from each other.

Regarding claim 8, Shanks et al. teach the limitation of claim 7.

Shanks et al. teach a transmitter (Figs. 1-2, 10-11) in the noncontact RF ID system that forms and transmits data information comprising a first waveform, a second waveform, and a third waveform, wherein:

the first waveform and the second waveform are formed by a basic waveform that has a state transition that either rises or falls at the approximate center part of the waveform (Figs. 3-4); and

transmission is carried out by using the third waveform in place of the first waveform and the second waveform in the case in which transmission is carried out using the first waveform

and the second waveform and in the case in which said one state transition is generated outside the approximate center part of the waveform (Figs. 3-5, paragraphs 0096-0103).

But, Shanks et al. do not expressly disclose the third waveform is formed by a plurality of basic waveforms that have one state transition at the approximate center part of the waveform and said one state transition is generated only at the approximate center part of the plurality of basic waveforms.

However, at the time the invention was made, it would have been a person of ordinary skill in the art to modify the third waveform into formed by a plurality of basic waveforms that have one state transition at the approximate center part of the waveform and said one state transition is generated only at the approximate center part of the plurality of basic waveforms. One of ordinary skill in the art would have expected Applicant's invention to perform equally well with the waveform Shanks et al. disclose because the third waveform serves its representation and distinguishable from the first and second waveforms.

Regarding claim 9, Shanks et al. teach the limitation of claim 7.

Shanks et al. teach a receiver (Figs. 1-2, 10-11) in the noncontact RF ID system that receivesdata information comprising a first waveform and a second waveform, and a third waveform, wherein:

the first waveform and the second waveform are formed by a basic waveform that has a state transition that either rises or falls at the approximate center part of the waveform (Figs. 3-4); and in the case in which the third waveform is received, the receiver recognizes the reception of a combination of the first waveform and the second waveform in which said one state

transition has occurred outside the approximate center of the basic waveform (Figs. 3-5, paragraphs 0096-0103).

But, Shanks et al. do not expressly disclose the third waveform is formed by a plurality of basic waveforms that have one state transition at the approximate center part of the waveform and the one state transition is generated only at the approximate center part of the plurality of basic waveforms.

However, at the time the invention was made, it would have been a person of ordinary skill in the art to modify the third waveform into formed by a plurality of basic waveforms that have one state transition at the approximate center part of the waveform and the one state transition is generated only at the approximate center part of the plurality of basic waveforms. One of ordinary skill in the art would have expected Applicant's invention to perform equally well with the waveform Shanks et al. disclose because the third waveform serves its representation and distinguishable from the first and second waveforms.

### *Conclusion*

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zhiyu Lu whose telephone number is (571) 272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zhiyu Lu
March 12, 2007

NAY MAUNG
SUPERVISORY PATENT EXAMINER